COMPUTER SCIENCE CS3753
Assignment #6

Points: 40 **Weight**: 2%
Due: Friday, November 16, 2018 at 11:55 pm in BlackBoard
Note: Late assignment will not be accepted without instructor's pre–approval.

Hand in a Jupyter notebook**, yourNmae-homework06.ipynb**, with appropriate markdown cells for descriptions and comments. Write Python code to solve each of the following questions.
This homework must be completed individually.

1. [20] In a small town, crimes occur at a Poisson rate of k per month. Write python code to find the probability of having exactly m month (not necessarily consecutive) with no crimes during the next year, and print a table

k	$m = 2$	$m = 3$	$m = 4$	$m = 5$
5				
6				
7				
8				

2. [20] The grade for an exam are normally distributed with mean μ and variance σ^2. Assume the following grading scheme: A (≥ 90), B (80 - 90), C(70 - 80), D(60 - 70) and F (≤ 60). Write a python function students_in_grade that takes the μ, σ^2, and the total number of student taking the exam, and print a statement predicating how many students are expected to get each grade. Apply this function to the following input settings.

   (a) $\mu = 80$, $\sigma^2 = 64$, and a total of 200 students took the exam.

   (b) $\mu = 70$, $\sigma^2 = 56$, and a total of 75 students took the exam.

   (c) $\mu = 75$, $\sigma^2 = 36$, and a total of 50 students took the exam.